

STUDIES IN THE EUPATORIEAE (ASTERACEAE). CXXIII.

ADDITIONS TO THE GENUS MIKANIA.

R. M. King and H. Robinson  
Smithsonian Institution, Washington, D.C. 20560.

Recent efforts in the genus Mikania have revealed the following four undescribed species.

Mikania standleyi R.M.King & H.Robinson, sp. nov.  
Plantae scandentes vel suffrutescentes paucè vel multo ramosae. Caules fulvi teretes striati dense scabridi interdum fistulosi. Folia opposita breviter petiolata, petiolis plerumque 1.0-1.5 cm longis; lamina ovata 3.5-7.0 cm longa 2-4 cm lata base rotundata margine integra ad apicem obtusa supra et subtus sparsim scabrida, nervis pinnatis, paribus secundariis prominentibus duplicibus in quarta inferiore valde ascendentibus. Inflorescentiae pyramidaliter paniculatae, ramis paniculatis retrorse scabridis. Capitula sessilia plerumque biniter vel tripliciter disposita ca. 9 mm alta. Squamae subinvolucris oblongae ca. 2.5 mm longae abaxialiter glabrae. Squamae involucris anguste oblongae ca. 5 mm longae et 1.0-1.2 mm latae obtusae extus sparsim puberulae. Corollae albae? 4.0-4.5 mm longae extus minute puberulae et paucè glanduliferae, tubis distinctis ca. 1.5 mm longis, limbis anguste campanulatis vel cylindricis, lobis ca. 0.5 mm longis ca. 0.4 mm latis, cellulis quadratis vel breviter oblongis, 25-35 $\mu$  latis; thecae antherarum ca. 1.3 mm longae, appendicibus late oblongis, ca. 200 $\mu$  longis et latis; styli inferne nodulosi glabri, appendicibus breviter papillois. Achaenia 5-costata 4.0-4.5 mm longa paucè breviter setifera et glandulifera. Setae pappi ca. 40 plerumque uniseriatae ad apicem vix incrassatae. Grana pollinis ca. 23 $\mu$  diam.

Type: COSTA RICA: San Jose: near Finca La Cima, above Los Lotes, North of El Copey, altitude 2100-2400 meters, December 21-22, 1925, Paul C. Standley 42814 (Holotype US!). Paratype COSTA RICA: Cartago: vicinity of Millsville, Pan-American Highway, about 3 km above Nivel, 3000-3300 meters, July 22 1949, Holm & Iltis 506 (US!).

The new species seems very closely related to M. steubelii Hieron. of northern South America but the

latter has generally shorter petioles and at least remotely subserrulate leaf margins, the stems and leaves lack the short stout scabrae and the hairs of the corolla are more concentrated toward the tips of the lobes.

Mikania steyermarkii R.M.King & H.Robinson, sp. nov. Plantae scandentes grosse herbaceae sparsim ramosae. Caules ful-virides teretes vel subhexagoni striati minute puberuli saepe fistulosi. Folia opposita anguste petiolata, petiolis 0.5-2.5 cm longis; lamina ovata vel lanceolata 6-10 cm longa 1.5-6.0 cm lata base rotundata vel subcuneata margine integra vel obscure subserrulata ad apicem anguste acuminata multo glandulo-punctata aliter subglabra prope basin valde trinervata, nervis secundariis prominentibus submargin-alibus longe ascendentibus. Inflorescentiae in ramis corymbosis congestis dispositae. Capitula ca. 1 cm alta plerumque tripliciter disposita sessilia. Squamae subinvolucrí prominentes anguste ellipticae 4-5 mm longae glandulo-punctatae et sparsim puberulae. Squamae involucrí anguste oblongae 6-7 mm longae ca. 1.2 mm latae ad apicem obtusae extus glandulo-punctatae et aliquantum puberulae. Corollae albae ca. 4.5 mm longae, tubis aliquantum distinctis ca. 2.5 mm longis, limbis anguste campanulatis, lobis brevibus ca.  $1\frac{1}{2}$  longioribus quam latioribus extus glanduliferis, cellulis breviter oblongis 20-30 $\mu$  latis; thecae anther-arum ca. 2 mm longae, appendicibus longe triangularibus 450-500 $\mu$  longis ca. 230 $\mu$  latis; styli inferne glabri, appendicibus breviter papillosis. Acheania 5-costata 3.5-4.0 mm longa multo glandulifera pauce pilifera. Setae pappi ca. 40 plerumque uniseriatae ad apicem leniter incrassatae. Grana pollinis 18 $\mu$  diam.

Type: VENEZUELA: Miranda: Distrito Brion: Entre Chuspa y Aricagua, 5.5 km oeste de Aricagua, 50 metros, 11 Marzo 1973, Steyermark & Espinosa 106893 (Holotype US!). Paratype: same locality, Steyermark & Espinosa 106895 (US!).

The species is rather distinct in the strong pair of secondary leaf veins running near the margins. The species has corymbose branches in the inflorescence and short corolla lobes similar to M. parviflora (Aubl.) Karst. but lacks the long papillae of the style. The species seems closer to M. gleasonii B.L.Robinson of British Guiana but the latter has larger purple corollas and a rather unique form of pappus with extra

smaller setae disposed in a distinct inner series. The new species has the major veins distinctly and narrowly raised on the upper surface but much more prominent below.

Mikania tillettii R.M.King & H.Robinson, sp. nov. Plantae scandentes grosse herbaceae sparsim ramosae. Caules rubescentes teretes vel subhexagoni striati glabri vel minute puberuli saepe anguste fistulosi. Folia opposita aliquantum anguste petiolata, petiolis 1.0-2.5 cm longis; lamina ovata usque ad 12 cm longa et 7 cm lata base rotundata vel subcuneata margine integra ad apicem breviter anguste acuminata multo minute glandulo-punctata aliter glabra prope basin valde subpinnate 3-5-nervata, nervis tertiariis obscuris. Inflorescentiae in ramis corymbosis laxis dispositae, pedicellis 1-4 mm longis minute puberulis. Capitula ca. 1 cm alta. Squamae subinvolucris anguste oblongae ca. 2 mm longae glabrae. Squamae involucris anguste oblongae ca. 5 mm longae ca. 1.2-1.5 mm latae ad apicem plerumque rotundatae extus glandulo-punctatae sparsim puberulae. Corollae albae vel rubescens? ca. 5.5 mm longae anguste infundibulares extus pauca glanduliferae, tubis indistinctis angustis, lobis ca. 1 mm longis 0.4 mm latis, cellulis oblongis 20-30 $\mu$  latis, parietibus sinuosis; thecae antherarum ca. 1 mm longae, appendicibus longe triangularibus 400-450 $\mu$  longis ca. 180 $\mu$  latis; styli inferni glabri, appendicibus breviter papillosis. Achaenia 5-costata 3.5-4.0 mm longa glandulifera. Setae pappi ca. 40 plerumque uniseriatae ad apicem leniter incrassatae. Grana pollinis ca. 23 $\mu$  diam.

Type: BRITISH GUIANA: upper Mazaruni River Basin: Mt. Ayanganna, mixed evergreen forest on and below talus from cliffs along NE side; elevation 750-900 m., August 18, 1960, Tillett, Tillett & Boyan 45894 (Holotype US!).

The species has most of the characters of Mikania gleasonii and M. steyermarkii with the more pedicellate heads of the former and the mostly uniseriate pappus of the latter. The species differs from M. gleasonii by the presence of a distinct subinvolucral bract and the bract is much more prominent than in M. steyermarkii.

Mikania tysonii R.M.King & H.Robinson, sp. nov.  
Plantae decumbentes vel scandentes saepe epiphyticae  
pauce vel multo ramosae. Caules fulvi teretes vel  
leniter hexagoni interdum anguste fistulosi. Folia  
opposita anguste petiolata, petiolis 0.5-1.5 cm longis;  
lamina elliptica vel obovata usque ad 8 cm longa et  
3.5 cm lata base breviter cuneata margine integra ad  
apicem anguste rotundata vel breviter acuminata  
interdum rubre multo glandulo-punctata aliter glabra  
in sicca minute rugosa, nervis secundariis binis dup-  
licibus parallelis subbasilaribus ascendentibus.  
Inflorescentiae irregulariter corymboso-paniculatae,  
pedicellis 1.5-6.0 mm longis mm longis sparse puberulis.  
Capitula ca. 5 mm alta. Squamae subinvolucris anguste  
oblongae ca. 1.5 mm longae. Squamae involucris oblongae  
ca. 3.5 mm longae ca. 1 mm latae ad apicem rotundatae  
extus sparse puberulae et plerumque rubro-glanduloso-  
punctatae. Corollae albae ca. 4.5 mm longae extus  
glanduliferae, tubis brevibus indistinctis, lobis duplo  
longioribus quam latioribus; thecae antherarum ca. 1 mm  
longae, appendicibus late oblongo-ovatis 200-300 $\mu$   
longis ca. 150 $\mu$  latis; styli inferne glabri, appendici-  
bus breviter papillosis. Achaenia 4-5 costata 2-3 mm  
longa multo glandulifera interdum puberula. Setae  
pappi ca. 50 plerumque uniseriatae ad apicem distincte  
incrassatae. Grana pollinis ca. 22 $\mu$  diam.

Type: PANAMA: Panama: top Cerro Jefe, 3000 ft.  
July 9, 1966, Tyson, Dwyer, & Blum 4429 (Holotype US!  
Isotype MO!). Paratypes: PANAMA: Bocas del Toro: Old  
Bank Island, vicinity of Chiriqui Lagoon, von Wedel  
2041 (MO); Cocle: La Mesa, 5 miles N of El Valle,  
2500 ft, Tyson et al 2445 (US); Panama: Cerro Jefe,  
2900 ft, Dwyer & Gauger 7378 (MO).

The species occurs in a series of localities in  
central and western Panama. The plants are rather  
small with mostly elliptical leaves. The inflorescence  
is of an intermediate corymbose-paniculate shape that  
cannot be easily placed in any of the general group-  
ings of the genus. A close relative might be M. lucida  
Blake of Venezuela which has a smaller thinner anther  
appendage.

Mikania zonensis R.M.King & H.Robinson, sp. nov.  
Plantae scandentes grosse herbaceae sparsim ramosae.  
Caules sensim subnigrescentes teretes striati subglabri  
anguste fistulosi. Folia opposita anguste petiolata,

petiolis usque ad 4 cm longis; lamina elliptica-ovata usque ad 21 cm longa 8 cm lata base rotundata vel breviter cuneata non acuminata margine integra ad apicem anguste caudate acuminata supra et subtus subglabra, nervis subtus vix prominentibus sparsim puberulis, paribus secundariis distinctis prope basem paucis valde ascendentibus. Inflorescentiae in ramis corymbosis congestis dispositae. Capitula ca. 8-9 mm alta tripliciter disposita sessilia. Squamae subinvolucris perminutae ca. 1 mm longae. Squamae involucri anguste oblongae ca. 5 mm longae ca. 1.5 mm latae ad apicem rotundatae extus striatae sparsim glandulopunctatae et superne puberulae. Corollae albae, ca. 5 mm longae extus glandulopunctatae, tubis subdistinctis ca. 2 mm longis, limbis anguste infundibularibus extus glandulopunctatis, lobis equilateraliter triangularibus extus puberulis, cellulis quadratis vel breviter oblongis 20-30 $\mu$  latis; thecae antherarum ca. 1.5 mm longae, appendicibus longe triangularibus ca. 400  $\mu$  longis ca. 240 $\mu$  latis; styli inferne distincte sparsim papilloso, appendicibus longe papilloso. Achaenia 5-costata ca. 3.5 mm longa sensim valde corticata. Setae pappi ca. 60 plerumque uniseriatae ad apicem non vel leniter incrassatae. Grana pollinis ca. 18 $\mu$  diam.

Type: PANAMA: Canal Zone: Albrook; U. S. Army Tropic Test Center Site, April 1965, Dwyer & Robyns 115 (Holotype MO! Isotype US!).

The species is closely related to M. guaco with the same form of style and achene. The species differs in the leaf which is more elliptical, less decurrent and more glabrous.

#### Acknowledgement

This study was supported in part by the National Science Foundation Grant GB 20502 to the senior author.



PLANT OF COSTA RICA

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Mikania standleyi R.M.King & H.Robinson.



MINISTERIO DE AGRICULTURA Y CRIA  
HERBARIO NACIONAL DE VENEZUELA  
FLORA DE VENEZUELA

No 106693  
Mikania 5'

Climbing high on Piper (106692); flowers  
dull white; leaves subcoriaceous, deep green  
above, dull green below.

Entre Guasra y Arismonia, 1.5 km. oeste de  
Arismonia

831100

Altura:

Num Herb:

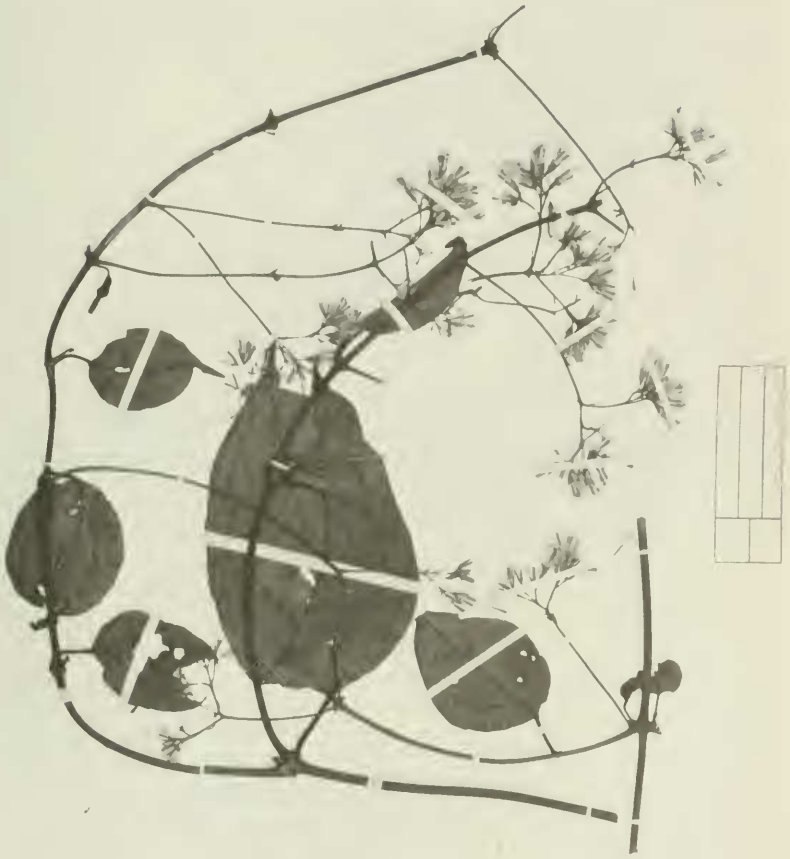
Julian A. Steyermark

INSTITUTO VENEZOLANO DE INVESTIGACIONES CIENTÍFICAS

2686716

HERBARIO NACIONAL DE VENEZUELA

Mikania steyermarkii R.M.King & H.Robinson.



Mikania tillettii R.M.King & H.Robinson.





U.S. ARMY TROPIC TEST CENTER  
 Fort Clayton, Canal Zone

COUNTRY: PANAMA PROVINCE:

Coll.

Det.

No.

Date:

ETC Label 1001  
 8 Feb 60 (Test)

2639820

Mikania tysonii R.M.King & H.Robinson.



PLANTS OF PANAMA

Mikania zonensis R.M.King & H.Robinson